

2009 Franklin County Bikeway Plan Update



**Franklin Regional Council of Governments
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Executive Summary

Background

The *2009 Franklin County Bikeway Plan Update* supersedes the *Franklin County Bikeway Plan* completed in 1993. The focus of the *1993 Bikeway Plan* was the development and implementation of the 44 mile Franklin County Bikeway network consisting of on and off-road bicycle routes located in the central section of Franklin County near the Connecticut River. This initial part of the bikeway network is now constructed; the *2009 Bikeway Plan Update* identifies potential expansions of the Bikeway throughout Franklin County and connections to neighboring counties and states.

The primary goal of the *Franklin County Bikeway Plan Update* is to plan for a transportation system that encourages bicycling as a viable mode of transportation and reduces automobile trips. In addition, the plan recognizes and supports bicycling for recreation, physical fitness, and for conservation purposes as a part of a sustainable “green” transportation system. The needs of commuters, students, store patrons, outdoor enthusiasts, and visitors to the region who may be bicycling for different reasons are considered and discussed. Also, areas of needed improvements to the existing bicycling networks are identified. The plan identifies the next steps to creating a bicycle friendly region.

Franklin County is located in the northern section of the Connecticut River Valley in Massachusetts. It is the most rural county in Massachusetts with a population of approximately 72,300 people and a population density of 100 people per square mile (U.S. Census Bureau, 2005). It is characterized by low population density, rural development patterns and, in some areas, hilly terrain. Franklin County’s winding country roads and distinctive scenery provide a beautiful backdrop for bicycling. There are many potential bicycling routes that travel on the numerous low volume roadways in the region. However, the rural nature of the region also makes the development of a transportation system that does not depend heavily on the personal automobile challenging. Individuals often commute long distances to employment, school or to run errands. The plan considers the topographic features of the region and the demographic characteristics of the population while planning new and expanded bicycle infrastructure and routes.

An extensive public participation process was carried out during the development of the plan. Relevant regional, local and state plans that include bicycle related issues were reviewed. An inventory of the existing facilities in Franklin County is included in the plan. The plan also includes information on promotional and educational programs including Bikes on Buses, Enjoy the Ride: Share the Road in the Connecticut River Valley, the provision of parking for bicycles, Franklin County Bikeway Maps, and bicycle accommodation as a part of road reconstruction projects.

The suitability of the roadways as potential bikeway routes vary widely in the county. Before the routes proposed in this plan were chosen to be part of the Franklin County Bikeway Network, the FRCOG staff conducted field observations of the roadway conditions to evaluate the suitability of individual roads for use by bicycles. The routes were evaluated based on the travel lane width, shoulder width, posted speed limits, traffic volumes, curb-cut frequency, heavy truck volume, pavement conditions and grade in order to determine the suitability as a bicycling route. In addition, the different categories of bicyclist including novice and children bicyclists, intermediate bicyclists, expert recreational/racing bicyclists, and commuters are recognized in the plan. These different skill levels of the bicyclist have different and sometimes conflicting needs and goals when bicycling.

Summary of the Findings and Recommendations

The opportunities for developing additional shared use paths which are separated from traffic and designed for use by non-motorized vehicles are limited. The plan summarizes a few potential off road facilities many of which were previously identified and are in varying stages of preliminary design. Additionally, some suggestions were made to improve the existing bikeway system including the installation of bathroom facilities, the establishment of more parking facilities, and increasing the maintenance of the routes during the winter such as plowing.

The plan also details shared roadway routes that link the existing Franklin County Bikeway to the other areas of the county, Hampshire County, Worcester County, Vermont and New Hampshire. These shared roadway routes were identified during the outreach completed as part of this planning process or the observation of cyclists regularly using these routes. By law almost all roads in the Commonwealth, excluding interstate highways and most limited-access highways, are open to bicycling. However, not all roads are appropriate for even the most experienced bicyclist. Bicyclists are also often in search of routes that have low traffic volumes and a shoulder that has smooth pavement and is generally kept clear of debris.

The shared roadway routes are detailed in the plan by section of the county (west, central and east). These routes vary in the level of difficulty and suitability for bicyclists. Therefore, the routes have been classified based on the general conditions of the route and the experience level, novice, intermediate or advanced, of the rider for which the particular route is best suited. Please note that due to the wide range of experience among bicyclists, these classifications are subjective and are intended only to provide a relative level of difficulty for each route. It is advised that before using a route, bicyclists should assess it first to ensure that the route is appropriate for their level of experience.

In addition to providing safe bicycling facilities, it is important to educate users about personal safety and the “rules of the road.” The FRCOG works to include bicycle safety instructions and information that encourage safe bicycling practices whenever possible. A summary of this work is included in the plan.

This *Franklin County Bikeway Plan Update* builds on the work that has been completed to date in Franklin County to identify and develop bicycle facilities. The recommendations of the plan provide direction for future bicycle facility planning that are intended to create an atmosphere that encourages and supports bicycling.

- To establish bikeway routes connecting the existing Franklin County Bikeway in the central part of the region with the outlying areas.
- To identify and construct bikeway routes (on-road and off-road) connecting major employment centers with residential areas.
- To develop bikeway routes connecting with public transit and/or park and ride lots.
- To identify and implement measures that will improve safety for bicyclists in the region.
- To establish bikeway routes (preferably off-road) connecting schools with residential areas as a means of creating safe travel routes to school.
- To establish bikeway routes connecting Franklin County with neighboring counties and states.
- Provide information and resources to encourage tourism opportunities related to bicycling throughout the county.
- To increase the number of trips made by bicycle for transportation and recreational purposes.

Introduction

The History of Bikeway Planning in Franklin County

Bicycle facility planning has a long and exciting history in Franklin County. The Franklin County Bikeway Committee began its initial conceptual planning of the Franklin County Bikeway during the 1980s. At that time, a group of interested and enthusiastic residents met to discuss and plan future bicycle infrastructure in the region years before planning for bicycle facilities became a regular part of the regional transportation planning process. In 1985 the Committee produced a preliminary plan for a bikeway in Franklin County. The plan was a result of deliberations by the Committee, meetings with local Select Boards, other town officials, and various agencies such as the Franklin County Commission, the Franklin and Hampshire Conservation District, Western Massachusetts Electric Company (Northeast Utilities), the Massachusetts Department of Conservation and Recreation (DCR, formerly the Department of Environmental Management) and the public at large. The plan received strong local support and was submitted to the State for review, but it did not receive funding and the bikeway was never constructed.

In 1993, planning for the Bikeway began in earnest as two national legislative bills were passed that provided the support and funding for the implementation of projects that encouraged the use of transportation alternatives to driving an automobile. First, the Clean Air Act Amendments (CAAA) of 1990 were passed and targeted the reduction of vehicle emissions to improve air quality. Second, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 was passed; it changed the way that transportation planning activities were conducted and emphasized the use of alternative transportation and multi-modal travel connections. ISTEA mandated that planning for bicycle facilities be routinely included as a part of regional transportation planning activities. ISTEA also committed funding to carry out the goals of these laws. Bicycle and pedestrian facilities received significant attention in ISTEA as non-polluting forms of transportation. These federal legislative actions provided bicycling with the support necessary to get the Franklin County Bikeway Project off the ground and moving towards implementation. Today, the current Federal transportation bill “SAFETEA-LU” has reinforced and reaffirmed the commitment to funding bicycle projects as part of the federal transportation agenda.

In light of this interest in implementing bicycle facility projects, the FRCOG (then the Franklin County Commission) took action to revive and update the 1985 Franklin County Bikeway proposal and secure funding for its construction. The Franklin County Bikeway Committee was reactivated. The committee held regular public meetings and received public input throughout the planning process. As a result, the *1993 Franklin County Bikeway Plan* was completed and became the blueprint for the bikeway planning that took place over the next 15 years. The *1993 Franklin County Bikeway Plan* focused on the value of the bikeway as a transportation

alternative to driving. The final plans for the Franklin County Bikeway included 44 miles of facilities that travel through eight Franklin County communities: Deerfield, Erving, Gill, Greenfield, Leverett, Montague, Northfield, and Sunderland.

To date, the bicycle facility development and construction has largely consisted of work to implement the ideas that were identified in the *1993 Franklin County Bikeway Plan*. The bikeway system consists of a regional network of on and off-road bicycle routes that is centered along the Connecticut River. It is a reality, today, because of the commitment and persistence of many dedicated individuals and organizations.

2009 Franklin County Bikeway Plan Update

One of the primary goals of the Franklin Regional Council of Governments' (FRCOG) transportation planning program and the development of this updated *Franklin County Bikeway Plan* is to design facilities and a transportation system that encourage bicycling as a viable mode of transportation and reduces auto trips. This Bikeway Plan Update expands the system created in the 1993 plan. It identifies the next steps to encouraging a bicycle friendly region.

In addition, this plan considers and discusses bicycling for other purposes. The plan recognizes and supports bicycling for recreation, physical fitness, and for conservation purposes as a part of a sustainable “green” transportation system. Additionally, it considers and discusses the needs of those who are bicycling for many different reasons including commuters, students, store patrons, outdoor enthusiasts, and visitors to the region. This plan recognizes that bicycling allows an individual to enjoy the physical beauty of the area, partake in a physically challenging activity, and to use a means of transportation that is sustainable and clean.



Bicycling on the Connecticut River Scenic Farm Byway

This plan identifies bicycle links to the bordering regions and states. Specifically, links to the south to Hampshire County, to the west to Berkshire County, to the east to Worcester County, and to the north to Vermont and New Hampshire. In addition, the plan expands and diversifies the regional objectives to include recreation, tourism and quality of life related bicycling issues.

Vision for the Bikeway Plan Update

Purpose

The purpose of this document is to update the 1993 Franklin County Bikeway Plan, to expand the geographic range beyond the central area of Franklin County, and to diversify the original objectives to include recreation, tourism and quality of life issues related bicycling.

Goals

The goals of the Franklin County Bikeway Plan Update are:

- Encourage bicycling for transportation purposes as a viable alternative to driving a motorized vehicle.
- Improve safety for bicyclists in the region.
- Identify additional tools and resources to educate bicyclists on the rules of the road and other safe bicycling practices.
- Improve inter-regional and intra-regional connections and accessibility for bicyclists.
- Educate the public about resources for bicyclists.
- Connect employment centers, schools, shopping centers and other destinations.
- Encourage bicycling as a recreational activity.
- Encourage bicycling as a regional tourism activity and complete measures which will identify Franklin County as a great place to come and bicycle.
- Identify bicycling routes that could encourage tourism throughout Franklin County.
- Include bicycling as a part of the region's "green" and sustainable transportation agenda.

Public Participation Process

This *Franklin County Bikeway Plan Update* was created with the input of many individuals and organizations throughout Franklin County and its neighboring regions. In June 2008, as an initial step to creating this plan, the FRCOG solicited input from all of the towns in Franklin County through a telephone survey. Town officials were asked about bicycle related improvements planned in their community and future transportation needs or bicycle related infrastructure improvements that should be incorporated in the updated Bikeway Plan. The telephone survey was conducted with either the Town Administrator or a Selectboard member. Twenty-two of the twenty-six towns in Franklin County responded to the survey. In addition, the FRCOG interviewed other individuals and representatives of organizations who are knowledgeable about bicycling in the region.

The FRCOG held a meeting of the Franklin County Bikeway Committee on July 17, 2008 to receive their input on future bikeway planning. The group, made up of local bicycle enthusiasts,

suggested specific routes that would expand to the Franklin County Bikeway. These proposed routes were investigated further and evaluated during site visits.

In addition, the FRCOG held a public meeting on September 3, 2008, to receive public input. Meeting notices were mailed to all of the Selectboard and Town Clerk's offices in Franklin County, as well as to the members of the Franklin Regional Planning Board, the Franklin Regional Transportation Planning Organization, the Franklin Regional Planning Board's Transportation Subcommittee, and the Franklin County Bikeway Committee. Also, a press release announcing the public meeting was sent to the local newspapers. Articles about the meeting appeared in the *Greenfield Recorder* and the Franklin County Edition of the *Springfield Republican*. The meeting notice was also posted on the FRCOG's website. All of the information and comments that was received was reviewed and evaluated for inclusion in the plan.

In accordance with the Franklin Regional Council of Governments Public Participation Process, the draft plan was made available for a 30 day public review. The 30 day public review was commenced by the Franklin County Transportation Planning Organization (FCTPO) on August 26, 2009. Electronic copies of the draft report were sent to members of the Franklin County Transportation Planning Organization, the Franklin Regional Planning Board and the Franklin Regional Planning Board Transportation Subcommittee. The commencement of the 30 day public review period was advertised in *The Recorder* local newspaper in Greenfield and in *The Athol Daily News* in Athol.

Franklin County Geographic, Income, Employment, Population and Commuting Statistics

Franklin County is a great place to bicycle. The region's winding country roads and distinctive scenery provide a beautiful backdrop for bicycling. In addition, many routes take advantage of the numerous low volume roadways in the region. Consequently, bicycling is a viable mode of transportation as well as a great means of physical fitness and recreational activity. Regardless of whether you are a novice or an experienced rider, there are many route options throughout the region. A bicyclist's experience level and the multiple purposes for riding were among the considerations taken into account when planning the routes that are outlined in this plan.

In order to develop a realistic plan for bicycling that foster bicycle-friendly environment and encourages biking instead of driving, the FRCOG considered the geographic and demographic characteristics of the region and when and why people bicycle in the area. This geographic, demographic and employment information is provided to better understand the issues and needs associated with planning an expanded bikeway system in Franklin County.

Geography

Franklin County is located in the northern section of the Connecticut River Valley in Massachusetts. It is the most rural county in Massachusetts with a population of approximately 72,300 people and a population density of 100 people per square mile (U. S. Census Bureau, 2005). There are twenty-six municipalities in the county. They range in size from the City of Greenfield with an estimated population of 17,835 residents (2005) to the Town of Monroe which has a population of 100 residents. Franklin County borders the states of Vermont and New Hampshire, and within Massachusetts, it borders Worcester, Hampshire, and Berkshire Counties.

The landscape of Franklin County is predominately forests, farmland, and open space. In 1999, the most recent year for which there is county-wide land use data available, 77% of the land was forested, 17% was in agriculture, and the remaining 6% was developed for residential and commercial uses. Despite national trends towards suburbanization, Franklin County has remained a predominantly rural region.

The topography of the Franklin County varies and in some areas can be quite challenging for bicycling. The central section of the county in the Connecticut River Valley is the most flat; it becomes more sloping at the sides of the river valley. The eastern section of the county is characterized by steep ridges and mountainous terrain except near the Millers River. The western portion of Franklin County has the highest elevations in the county as it lies in the Berkshire Hills.

Income Statistics

A number of statistics show that Franklin County's income levels are consistently lower than the other counties in Massachusetts. According to the 2000 U. S. Census, the median household income for Franklin County was \$40,768, as compared to the statewide median household income of \$50,502 – a difference of 24%. This lower household income reflects both the lower cost of living in the county, and also the loss of many of the region's manufacturing and industrial jobs. The poverty rate for Franklin County has increased from 8.9% in 2000 to 9.2% in 2004 (Bureau of the Census, Small Area Income Estimates, 2005). These numbers are lower than the Commonwealth's average and means that approximately 6,600 residents are living below the poverty level. Lower income populations would benefit from the increased transportation options that an expanded Franklin County Bikeway would offer, because individuals could avoid or defray the high costs associated with owning and maintaining a car. An expanded Franklin County Bikeway Network and other bicycle related improvements would provide additional viable transportation options.

Employment Statistics

There are a variety of manufacturing and service industries located in the county. While only a small percentage of the land in Franklin County is developed, a majority of the County's largest employers are located along main transportation routes, which are Interstate 91 (a limited access highway), Routes 2/2A, Route 5/10, Route 63, Route 112, and Route 116 in the towns of Deerfield, Greenfield, Montague, Orange, and Whately.

Also, to plan potential bike commute trips, it is important to consider whether there are employers and large employment centers located nearby in Hampshire County, Berkshire County, Worcester County, Vermont and New Hampshire. In 2000, approximately 63% of Franklin County residents worked within Franklin County. The 37% that worked outside the county primarily commuted to Hampshire County (21%), Worcester County (5%), Hampden County (5%), or Windham County, VT (2%), (U. S. Census Bureau, 2000).

Table 1 shows the largest employers of Franklin County residents. Twelve of the top 20 employers of Franklin County residents are located in Hampshire County, and of this top 20, most are located in Amherst. Of these 20 employers, South Deerfield is the town in Franklin County with the most employees.

Table 1: Largest Employers of Franklin County Residents

Name of Employer	Number of Employees	Location of Employer	County of Employer
University of Massachusetts	5,000-9,999	Amherst	Hampshire
C & S Wholesale Groceries Inc.	1,000-4,999	Hatfield	Hampshire
Cooley Dickinson Hospital	1,000-4,999	Northampton	Hampshire
Smith College	1,000-4,999	Northampton	Hampshire
Yankee Candle Co. Inc.	1,000-4,999	Whately	Franklin
Franklin Medical Center	500-999	Greenfield	Franklin
Yankee Candle Co.	500-999	South Deerfield	Franklin
Amherst College	500-999	Amherst	Hampshire
Delivery Express	500-999	Amherst	Hampshire
US Veterans Medical Center	500-999	Leeds	Hampshire
V A Medical Center Billing Pharm	500-999	Leeds	Hampshire
Hampshire College	250-499	Amherst	Hampshire
Mullins Center of University of Mass.	250-499	Amherst	Hampshire
Super Stop and Shop	250-499	Hadley	Hampshire
Super Stop and Shop	250-499	Northampton	Hampshire
Channing Bete Co. Inc.	250-499	South Deerfield	Franklin
Farren Care Center Inc.	250-499	Turners Falls	Franklin
Greenfield Community College	250-499	Greenfield	Franklin
Hardigg Industries Inc.	250-499	South Deerfield	Franklin
Phoenix Life Insurance Co.	250-499	Greenfield	Franklin

Source: MA Office of Labor & Workforce; June 16, 2008

Population

Generally, the population of Franklin County has remained relatively stable. Between 1990 and 2000 it increased by about 1,440 residents, which is equal to a 2.1% growth rate. Some towns in Franklin County grew at a slightly faster rate during this time period. Generally, these faster growing communities are located close to job opportunities primarily in Hampshire County: Conway (18%), Shutesbury (16%), New Salem (16%), Sunderland (11%), and Whately (14%). A few towns in the county lost population over this time period. These towns were Monroe and Rowe, which are located the farthest from any major employment center.

More recently, the U. S. Census estimates that Franklin County's population has increased slightly between 2000 and 2006. The Towns of Northfield, Orange, Erving, Conway, and Bernardston grew the most during this period. During this same time, Greenfield and Montague experienced population losses.

Population projections show that over the next twenty-five years, Franklin County will grow by 26% or 18,565 people. This will bring the total population of the county to 90,100 residents by the year 2030. A larger portion of this population will be age 65 and older. This cohort's percentage of the total population is projected to grow from 14% to 21% by 2030. Balancing this "graying" of the population is the projected increase of residents aged 4 years old and younger and individuals between the ages of 18-24. These age groups are expected to increase by at least 20%. This increase in the number of younger people in the county bodes well for interest in the Franklin County Bikeway. These projections are based on information provided by the Massachusetts State Data Center.

Commuting and Vehicle Ownership Statistics

As previously noted, Franklin County is characterized by low population density, rural development patterns, and in some areas hilly terrain. Consequently, the development of a transportation system that does not depend heavily on the personal automobile is challenging. There are limited public transportation options, and the county has a high rate of private vehicle ownership. This high rate of vehicle ownership is highlighted by increases in the number of registered motor vehicles during the previous fifteen years. Between 1990 and 2005, the number of registered vehicles increased by 47%, while the population in Franklin County grew by only 6%.

According to the 2000 U. S. Census, the best and most current source for commuting information, 89% of Franklin County residents commuted to work by private vehicle. Of these residents, 79% traveled alone, while 10% carpooled with other individuals. Only 1% of residents in the county used public transit. More residents walked to work (3%) than used public transit during that time. Also in 2000, approximately 5% of Franklin County residents worked at home.

Approximately 8% of households (or 2,285 households) within Franklin County do not own or have access to a motor vehicle. Statistically, these households tend to be either renters or the elderly, both of which also often have limited incomes. In 2000, an estimated 16% of renter households in the county did not have access to an automobile (U. S. Census Bureau, 2000).

The high number of renters without cars is most likely a result of two factors. First, rental housing is often located close to transit and other necessary amenities, and, second, the costs of owning and maintaining a vehicle are high. A study completed in 2000 by the Surface Transportation Policy Program (STPP), entitled *Driven to Spend*, found that a household could save thousands of dollars a year by switching from the use of a private vehicle to transit service. In addition to making the region more bicycle friendly, developing additional bicycle facilities has the potential to provide additional transportation alternatives for those who do not own a vehicle or would rather bicycle than drive. An expanded Franklin County Bikeway would provide a valuable transportation alternative.

Bicycling in Franklin County

Topographic and Geographic Challenges of the Region

As previously stated, the topography of Franklin County varies greatly. The central section of the county consists of the Connecticut River Valley, which is approximately five miles wide. This area is predominately flat with steep upward slopes at the sides. The elevation of the valley ranges between 100 and 300 feet above sea level. Because of this flat terrain, the existing Franklin County Bikeway Network is focused here where cycling is the easiest. The eastern section of the county is part of the Upland Plateau of Central Massachusetts. This is characterized by steep ridges and mountainous terrain with elevation changes between 1,000 and 1,200 feet above sea level. The western portion of Franklin County has the highest elevations in the county since it lies at the foot of the Berkshire Hills. It is characterized by hills, flattened ridge tops, and narrow valleys with elevation ranging between 1,000 and 1,900 feet above sea level. Overall, there is roughly a 900 to 1,600 foot change in elevation from the central valley portion of the county to the eastern and western portions.

This varied topography helps provide Franklin County with a stunning scenic landscape, but also poses some obstacles to expanding the Franklin County Bikeway into the eastern and western portions of the county, which are much steeper. During the survey of the towns that was completed as the initial information gathering phase of this project, several towns expressed interest in establishing bike facilities in their community, but were concerned that the steep terrain would make it very difficult to do so. The challenging terrain was taken into consideration during the exploration, evaluation and final recommendation of expansions to the Franklin County Bikeway Network. Efforts were made to avoid extremely challenging routes in

order to create a network that would be of interest to a wider range of potential users instead of just appealing to the most experienced riders.

The rural nature of the region creates a geographic challenge for those who would prefer to bicycle for transportation because the distance that one needs to travel to work and to run errands is often far enough to impede the use of a bicycle instead of an automobile.

Field Observations and Roadway Conditions

The suitability of the roadways as potential bikeway routes vary widely throughout the county. Before the routes proposed in this plan were chosen to be part of the Franklin County Bikeway Network, the FRCOG staff conducted field observations of the roadway conditions to evaluate the suitability of individual roads for use by bicycles. Given the fact that Franklin County is a rural region, many of the roads in the county either have narrow or no shoulders. In addition, the winter freeze and thaw cycle has the potential to degrade the pavement conditions, particularly the area on the edge of the pavement that is used by bicyclists, making travel by bicycle more difficult. Therefore, the evaluation of the proposed routes was an important component of future bikeway facility planning.

Potential Riders

There are different skill levels of the bicyclist who may be using the Franklin County Bikeway, all of whom have different and sometimes conflicting needs and goals. These potential bikeway users include novice bicyclists (including children), intermediate bicyclists, expert recreational/racing bicyclists, and commuters. The following descriptions are provided in order to create a profile of the different levels of bicyclist who were considered as the routes were evaluated.

Novice and children bicyclists tend to ride for shorter distances and are not comfortable riding with motor vehicle traffic within the roadway. As a result, they tend to ride either on bike paths or on flat roads that are relatively infrequently traveled by motor vehicles or have slow speed limits, such as neighborhood streets. Also, novice and children bicyclists will ride on sidewalks when available because they feel safer riding in a location that is separated from traffic. Novice and children riders may be unfamiliar with the rules of the road. As a result, they are more willing to take less direct routes to destinations in order to avoid areas with high amounts of traffic or complex intersections.

Intermediate bicyclists have some riding experience and skills. The intermediate bicyclist rides on a regular basis during the bicycling season either for touring, commuting or training purposes. The intermediate bicyclist is comfortable being on their bicycle, and can handle varying terrains and conditions (such as moderate hills and traffic volumes).

Expert recreational/racing bicyclists tend to ride for long distances on all types of roadways and are comfortable riding alongside motor vehicles within the roadway. They use their bicycles as if they were driving a motor vehicle and can operate under most traffic conditions. Expert bicyclists will often ride at high speeds – approximately 20 mph on flat ground and 40 mph on steep descents. The National Center for Bicycling and Walking estimates that fewer than 5% of the nearly 100 million bicycle owners in the country would qualify as, or consider themselves experienced or highly skilled bicyclists.

Commuters' goals are to be able to safely travel to their workplace and/or to run errands. The distances that they are willing to travel depend on their expertise level, but commonly it is for relatively short distances. They prefer routes that have few interruptions and that provide the most direct access to their destinations. Commuters are usually comfortable riding within the roadway alongside motor vehicle traffic and are knowledgeable about the common rules of the road and right of way.

Other Planning Documents that Include Bicycle Facility Planning

Franklin Regional Transportation Plan

The *2007 Franklin Regional Long Range Transportation Plan (RTP)* includes a chapter which discusses regional bicycle facilities. At the time that the 2007 plan update was completed, the highest priority was the continued advocacy for the completion of the Franklin County Bikeway (as it was planned in the 1993 Bikeway Plan). However, since the completion of that update, much of the Franklin County Bikeway has been constructed or is close to being finished.

The 2007 RTP acknowledged that the next step was to look beyond the Franklin County Bikeway project, and identify connections to expand the bicycling network countywide. The RTP also noted that some preliminary conceptual design work has already been undertaken in the eastern portion of the region in the towns of Erving, Orange and Shutesbury. In addition, the RTP noted that future bicycle infrastructure planning will involve exploring opportunities to better connect the Franklin County Bikeway system to bike paths and routes outside of Franklin County such as the Norwottuck Rail Trail which runs between Amherst and Northampton in Hampshire County, and bicycle facilities in Windham County, Vermont and Cheshire County, New Hampshire.

RTP Recommendations for Bicycle Facilities

- Continue to oversee the completion of the remaining segments of the Franklin County Bikeway which are currently in construction.
- Create and distribute a Franklin County Bikeway Map to help promote bicycling in Franklin County.

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- Work to identify and evaluate the viability of potential extensions of the Franklin County Bikeway, and of potential connections to other bicycle trails and paths in the greater region.
 - Continue to work with the town of Orange to develop a bicycle route along the Millers River and assist the town's economic development efforts.
 - Continue to work with the town of Erving to further explore the options for developing a bicycle connection between the Erving center and the Farley areas of Erving.
 - As opportunities arise, continue to improve appropriate roads for bicycle use.
 - Work with the Pioneer Valley Planning Commission to distribute the video and other media/publicity tools that were developed through the Share the Road in the Connecticut River Valley Project to promote the use of bicycles for transportation in Franklin, Hampden, and Hampshire Counties.
 - Explore opportunities for program and project development through the Safe Routes to School Program.

Town Planning Documents that Address Local Bicycling Issues and Infrastructure Needs

In Franklin County, many towns address local bicycling issues and infrastructure needs. Specifically, they do this in their Master Plans and Open Space and Recreation Plans. Several of the master plans, such as the Deerfield, Orange, and Erving Master Plans, outline potential detailed bikeway routes that would enable their residents to travel within their communities, while avoiding some of the more dangerous roads in the towns. These proposed routes are described later on in the "Future Needs" section of this plan.

Tourism is a growing sector of Franklin County's economy. Through their Master Plans and Community Development Plans, many towns have identified and prioritized tourism-related activities as a way to capitalize on the region's rich natural, cultural, and local historic resources. Agri-tourism, eco-tourism, and cultural tourism are all viable and growing ways of attracting visitors to Franklin County. The Franklin County Bikeway Network has a number of beautiful rural roads with low traffic volumes. These routes have the potential to draw recreational bicyclists to the area. This would contribute to the region's tourism sector by drawing people to the area to experience the county's beautiful scenery, and also enjoy the Bikeway Network.

State Level Bicycle Planning

2008 Massachusetts Bicycle Transportation Plan

In 2008, the Massachusetts Executive Office of Transportation and Public Works (EOTPW) completed an update of the state bike plan. The 2008 plan is the most recent step in advancing bicycle facility development in the state by:

- Providing the most complete, current inventory of existing on-road and off-road facilities (shared use paths), projects in the pipeline and long-term facility proposals;
- Recommending a 740-mile, seven corridor Bay State Greenway (BSG) network consisting of on-road and off-road facilities bound by a single identity;
- Providing an implementation strategy aimed at launching the BSG initially as mostly an on-road system, geared to both utilitarian and recreational travel and complemented by a long-term investment strategy; and
- Recommending other programmatic enhancements and interagency initiatives.

The seven corridor BSG network includes two recommended routes that travel through Franklin County. The **Connecticut River Valley Corridor (West)** is an on-road route which travels from the Vermont border to the Connecticut Border. In Franklin County, the route travels from the Vermont border on Route 142 in Northfield; on Route 10, Shaw and Hoe Shop Road in Bernardston; on Lampblack, Log Plain, Barton and Country Club Roads, Silver Street and Nash's Mill Road, on the Riverside Greenway, Riverside Drive, Colrain Street, Solon Street, Route 2A, River Street, Mill Street and Routes 5/10 in Greenfield; on Routes 5/10, Main Street, Mill Village Road, North Main Street, South Main Street, Long Plain Road, Route 116, Sugarloaf Street and River Road in Deerfield; and on River Road in Whately and continuing south on River Road into Hampshire County.

The second route is the **Connecticut River Valley Corridor (East)** that travels from the New Hampshire border to Chicopee. This route is also an on-road route. In Franklin County it travels from the New Hampshire border on Route 63 and Pine Meadow Road in Northfield; to River Road in Erving; East Mineral, Plains, Lake Pleasant, Old Northfield and Turners Falls Roads, Main Street, North Leverett Road and Route 63 in Montague; Route 63 in Sunderland; Route 63, Montague, Depot Long Hill and Amherst Roads in Leverett; and then into Hampshire County on Route 63 into Amherst.

In addition, the plan identifies twenty-two secondary network routes. These routes are intended to be a secondary part of the BSG network and provide connections between the primary system and key population and activity centers. Two of these secondary routes travel into Franklin County. The *Statewide Bike Plan* identified a secondary route connecting **Greenfield to Worcester** primarily following Route 122. However, this recommended route contains an error because Route 122 travels from Worcester to Orange where it then terminates in Orange Center.

As part of the planning and identification of potential routes that was completed as part of this plan, a route was identified between Orange and Greenfield. The recommended route which could be included as part of this statewide BSG network to link Route 122 in Orange to Greenfield is as follows: The route would connect from the town center of Orange at the intersection of Route 122 and West River Street. The route proceeds west on West River Street to Holtshire Road and onto West Orange Road. This leads bicyclists to Wendell Depot Road where they can travel southwest to Wendell town center. From there, the route heads northwest on Montague Road/Wendell Road/South Prospect Road until it enters the Village of Millers Falls. From Millers Falls, bicyclists travel on Millers Falls Road, which is part of the existing Franklin County Bikeway to Turners Falls, where bicyclists can use the Canalside Trail Bike Path to East Deerfield and onto McClelland Farm Road and River Road. River Road travels to Route 5/10. Bicyclists travel north on Route 5/10 to enter Greenfield over the Route 5/10 Cheapside Bridge.

The other secondary route identified in the BSG is the **Northfield to Sterling** Route. This route links the BSG's Connecticut River Route (East) in Northfield to Winchendon and then continues on to Sterling. This specific route is not detailed in the State Bike Plan.

In addition to identifying this statewide bicycling network, other Plan recommendations include general steps to promote bicycling:

- Better identify state roads and bridges where bicycles are legally permitted but do not accommodate bicycles today;
- Expand the "Share the Road" signs and outreach programs;
- Develop bicycle tourist publications through the Massachusetts Office of Travel and Tourism (MOTT);
- Improve safety through education and enforcement initiatives and facility performance measurement; and
- Further quantify the benefits of investments in projects and programs that improve bicycling conditions.

The state plan further identifies important reasons for improving bicycle transportation in Massachusetts which include: safety, mobility, congestion, parking, environment/energy, health, economy, affordability and demographics. For further information on the Massachusetts Bicycle Transportation Plan, log onto the website: <http://massbikeplan.org/>.

2006 Massachusetts Highway Department Project Development and Design Guide

A significant step in recognizing bicycling as a viable means of transportation, as well as to reasonably accommodate the needs of bicyclists in the transportation system came with the 2006 release of the Massachusetts Highway Department's *Project Development and Design Guide* (referred to as the *Design Guide*). This guide redefines how new projects are designed, and also

serves to ensure that MassHighway's transportation investments encourage projects that are context sensitive while meeting the needs of all system users.

The *Design Guide* treats non-motorized transportation modes as equal users of the roadway network. Through this comprehensive approach to roadway design, the guide mandates the development of "complete streets." The concept of complete streets refers to roadways that are designed to accommodate all users, including bicyclists.

The *Design Guide* refers to AASHTO's *1999 Guide for the Development of Bicycle Facilities* for detailed standards for designing bicycle facilities. It also refers to the *Manual on Uniform Traffic Control Devices (MUTCD)* 2000 edition for information and standards on signage and pavement markings for bicycle facilities. In the past it was difficult to deviate from the AASHTO and MUTCD standards. However, the 2006 *Design Guide* and the new design process do provide opportunities and flexibility in the design of bicycle facilities in Massachusetts when a valid reason can be provided for a specific situation.

Guidance on Shared Roadway Facilities

In discussing cross-section and roadside elements, the *Design Guide* addresses multimodal accommodation and context sensitivity. This chapter defines the goals of selecting an appropriate roadway cross-section and the design of roadside elements as:

- Develop a transportation infrastructure that provides access for all, a real choice of modes, and safety in equal measure for each mode of travel.
- Ensure that transportation facilities fit their physical setting and preserve scenic, historic, aesthetic, community and environmental resources to the extent possible.

In Franklin County, striking a balance between accommodating bicycles and creating a context sensitive design has been one of the greatest challenges in designing transportation infrastructure improvements and including bicycle facilities in roadway projects. There are sometimes competing desires to increase roadway shoulders to accommodate bicycles, yet widening is often perceived as compromising rural character. It is important to include the local community in discussions about roadway improvements and bicycle accommodation in an effort to find an acceptable solution.

Guidance on Shared Use Paths

The *Design Guide* also provides design considerations for shared use paths. Shared use paths are defined as facilities for non-motorized users that are independently aligned and not necessarily associated with parallel roadways. In other words they are off road paths. Shared use paths are designed to accommodate a variety of users including walkers, bicyclists, joggers, the disabled, skaters, pets and equestrians. The *Design Guide* states that it is important that the design elements chosen for a particular path should be compatible with the context of the project. Path

materials, barrier-types, landscaping, signage, walls and fencing should be properly selected to complement the character of the area in which the path is built.

General Information on Bicycle Facility Planning and Development

In planning and designing bikeway facilities for the Franklin County Bikeway, it is important to consider that bicyclists have a wide range of experience levels from novice to the very experienced rider, and the recommendations will take this into consideration. Some facilities may be more suitable for the less experienced or young riders, while other facilities may be more appropriate for use by only the most experienced and physically fit riders. Routes that are being recommended as suitable for a particular level of rider are noted as such. In addition, the recommended design standards and guidelines are not intended be a “one-size-fits-all” approach and may require modification to accommodate specific site constraints for a given location.

A “bikeway” is defined by AASHTO as any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. However, there are specific standards that apply to the design of certain facilities such as bike paths, lanes, routes, or shared roadways. The applicable design standards should be taken into consideration depending on the type of bike facility being constructed. In circumstances where State and/or Federal funding is being used it is required that the facility be designed in accordance with the guidance and process that is detailed in the *Design Guide*.



The Canalside Trail Bike Path in Unity Park in Turners Falls

Existing Bikeway Facilities and Regional Programs that Promote Bicycling

The Existing Franklin County Bikeway System

The existing Franklin County Bikeway consists of the network identified in the *1993 Franklin County Bikeway Plan*. The following described each of the segments of the Franklin County Bikeway.

Riverside Greenway

The **Riverside Greenway** section of the Franklin County Bikeway was completed in November 2004. The Riverside Greenway is a one-mile long off-road shared use path located in the City of Greenfield. This path connects a densely populated residential area with a heavily used public recreation facility. It also connects to nearby Greenfield Community College and downtown Greenfield. The path is owned and maintained by the City of Greenfield, and includes a bicycle and pedestrian bridge over the Green River.



The Riverside Greenway Bike Path in Greenfield

Canalside Trail Bike Path

The **Canalside Trail Bike Path** is located in the towns of Montague and Deerfield. The Canalside Trail connects from the Connecticut River Great Falls Discovery Center and Unity Park in the Village of Turners Falls in Montague, to McClelland Farm Road (located off of River Road) in northeast Deerfield. This section of the bikeway is an approximately three-mile off-road shared use bicycle path which travels along an approximately ten-foot wide paved path adjacent to the Connecticut River Canal in Turners Falls and along an abandoned rail corridor

(including a railroad bridge over the confluence of the Deerfield and Connecticut Rivers) in Deerfield and Montague City.



The Canalside Trail in Turners Falls near the Great Falls Discovery Center

The Connecticut River Great Falls Discovery Center is considered to be the start and terminus of the Franklin County Bikeway loop. The Discovery Center is a visitors' center and conservation education facility for the 410-mile Connecticut River Valley that was developed by the DCR, Massachusetts Department of Environmental Protection and the U.S. Department of Fish and Wildlife. The Canalside Trail travels past a number of mills that reflect Turners Falls' manufacturing history. A ribbon cutting ceremony to celebrate the completion of the Canalside Trail Bicycle Path project was held in May, 2008.



The Canalside Trail Bike Path in Montague and Deerfield

East Mineral Road Bridge

The **East Mineral Road Bridge**, previously served as a vehicular bridge, was redesigned for use as a bicycle and pedestrian bridge in the late 1980s. In the late 1990s, the State offered to reconstruct the bridge for use as a bike and pedestrian bridge if the towns of Montague and Erving agreed to take over the maintenance of the bridge once the reconstruction was completed. The reconstruction was completed in the summer of 2005. The bridge crosses the Millers River from East Mineral Road in Montague to River Road in Erving, and provides an important link in the Franklin County Bikeway Network. This link makes it possible for bicyclists to travel to the north of Route 2 into Erving and Northfield without having to cross Route 2 at grade. Bicyclists are able to use less heavily traveled roads, while still having access to the Connecticut River, as well as the Northfield Mountain Recreation and Environmental Center, and downtown Northfield.



The East Mineral Road Bridge over the Millers River in Montague and Erving

Path to Greenfield Community College and on Shared Roadway Route 112

There is also an approximately ½ mile shared use bike path on the Greenfield Community College (GCC) campus from Colrain Road; a shared, signed shoulder along Route 112 in Buckland; an approximately ½ mile shared use bike path along Turnpike Road in Turners Falls providing access to the Turners Falls High School; and a signed shoulder along Millers Falls Road in Montague.

The shared roadway sections of the Franklin County Bikeway as planned in the 1993 Plan have been signed with Franklin County Bikeway logo signs and “Share the Road” signs. This shared roadway network consists of four separate routes which include the Northfield Connector, the Greenfield-Montague Route, the Connecticut River Route, and the Leverett-Amherst Route.

Northfield Connector

The **Northfield Connector** is located in the towns of Northfield and Erving. It is approximately 11 miles of shared roadway that provides a non-motorized link from Montague to the Northfield Mountain Recreation and Environmental Center and downtown Northfield. Northfield Mountain, owned by FirstLight Power (formerly Northeast Utilities), is both a large regional employer (hydroelectric power plant pumped storage facility) and a significant regional recreation destination. Similarly, downtown Northfield is a thriving, traditional village center. The Northfield Connector is located entirely on existing roads. It does not require land acquisition, design, engineering, or construction. The connector includes roadway signage that clearly indicates the bikeway route and alerts motorists to the road's multiple use.

A sign plan, which uses Franklin County Bikeway Logo signs and Share the Road signs, has been developed and approved by the town of Northfield. The funding necessary to purchase the signs was secured through a Transportation Bond Bill appropriation in 1996 and Fiscal Year 2002 Transportation Demand Management (TDM) Program funds.

Greenfield-Montague Route

The **Greenfield-Montague Route** (formerly referred to as Phase IV of the Franklin County Bikeway) is comprised of a number of shared roadway connections that link the Canalside Trail, the Northfield Connector and the Riverside Greenway. These shared roadway facilities are located in the towns of Bernardston, Deerfield, Greenfield, Gill and Montague.

Connecticut River Route

The **Connecticut River Route** (formerly referred to as Phase V of the Franklin County Bikeway) is a spur that travels along the Connecticut River from Montague to Sunderland. Using Greenfield Road and Meadow Road in Montague, and Falls Road and Route 47 in Sunderland, bicyclists can access communities in Hampshire County and the Norwottuck Rail Trail which runs between Belchertown and Northampton.



Connecticut River Route in Montague

Leverett-Amherst Route

The **Leverett-Amherst Route** (formerly referred to as Phase VI of the Franklin County Bikeway) is a new spur branching off of Phase V in Montague that travels along Montague Road through Leverett Center to North Amherst.

Funding to complete signing for the Northfield Connector, the Greenfield-Montague Route, the Connecticut River Route, and the Leverett-Amherst Route was secured through the Fiscal Year 2002 Transportation Demand Management (TDM) Program for the *Share the Road in the Connecticut River Valley* project (see below).

Promotional and Educational Programs

Bikes on Buses

All of the Franklin Regional Transit Authority buses that operate on fixed routes in Franklin County are equipped with racks to carry bicycles. This allows a commuter to travel a portion of their trip by bus and a portion by bicycle. Future public transportation system expansions, as well as the future development of commuter rail services through the region, should consider the feasibility and appropriateness of allowing bicycles on board in order to encourage the use of bicycles as a viable form of transportation. Future projects should include improved parking at transit stops/stations and the accommodation of bicycles on board trains. The accommodation of bicycles on public transportation allows for more opportunities to travel by bicycle.

Enjoy the Ride: Share the Road in the Connecticut River Valley

Enjoy the Ride: Share the Road in the Connecticut River Valley is a promotional campaign to encourage bicycling instead of driving. The FRCOG, working in conjunction with the Pioneer Valley Planning Commission (PVPC), received \$150,000 in funding through the Fiscal Year 2002 Transportation Demand Management Program (TDM) for *Share the Road in the Connecticut River Valley*, an infrastructure improvement project and campaign to promote traveling by bicycle. The project is intended to increase accessibility and awareness for commuting by bicycle in Franklin, Hampshire, and Hamden Counties. The goal of the project is to reduce the number of automobile trips by encouraging transportation by bicycle instead. The project included the purchase, distribution, and installation of the Franklin County Bikeway Logo Trailblazing Signs and Share the Road signs along the designated shared roadway routes of the Franklin County Bikeway. The FRCOG also received funding to develop and distribute video, radio, internet-based and media/publicity tools to encourage and promote the use of bicycles for transportation in the Connecticut River Valley. These media tools were shared with PVPC and made available throughout the entire Connecticut River Valley.



*Filming “Enjoy the Ride: Share the Road in the Connecticut River Valley”
(Photo: Kathleen Miller Photography)*



Franklin County Bikeway Logo Signs installed in Greenfield

Provision of Parking for Bicycles

In December 2005, as part of this program, the Franklin Regional Council of Governments distributed bicycle parking racks to the towns in Franklin County. Twenty-two of the twenty-six towns in Franklin County requested and received bicycle parking racks for installation in their town. A total of 144 bicycle racks were purchased and distributed to Franklin County towns.



Bike Parking Racks installed in Downtown Greenfield

Franklin County Bikeway Map

The first **Franklin County Bikeway Map** was completed in 2008. During 2007, in anticipation of the completion of much of the previously planned Franklin County Bikeway, the first Franklin County Bikeway Map was developed and printed. The map was intended to serve as a resource guide for bicycling in Franklin County by providing information on the bikeway. The map promotes bicycling as a viable means of transportation in Franklin County. The first edition was distributed during the spring of 2008. It was made available to the general public. It is planned that updates to the map will be completed on a regular basis as reprints are completed.

Bicycle Accommodation as a Part of Road Reconstruction Projects

As road reconstruction projects are planned and designed, it is cost effective to consider simultaneously improving bicycle facilities. When such improvements are evaluated, it is also important that the rural nature of the roads in Franklin County be part of the considerations for a specific location. It is critical that all improvements be completed in a context sensitive manner and that the rural nature of the roads in Franklin County is preserved.

Future Bikeway Projects: Additions to the Franklin County Bikeway

One of the primary goals for developing the Franklin County Bikeway Plan Update was to plan for facilities and a transportation system that encourages bicycling as a viable mode of transportation and to reduce auto trips. In addition, it was envisioned that this bikeway plan update would go beyond planning bicycling solely for transportation and discuss it for other purposes including: recreation, physical fitness, and as a part of a sustainable “green” transportation system. During the public participation process for the plan’s development, it became clear that these additional bicycling topics were important to residents and deserved attention. The following section describes the input that was received and outlines new bikeway routes that will expand bicycle connections.

Although it would be best to build additional shared use paths which are separated from traffic and designed for use by non-motorized vehicles, the opportunities for developing these facilities are limited. In many locations shared-use paths have been constructed on abandoned rail beds. In Franklin County, as the railroad rights-of-way were abandoned they were legally abandoned back to the abutters and therefore the rights-of-way are no longer available for the development of bicycle facilities. Since it may be difficult to find available rights-of-way to construct shared use paths, the opportunities for shared roadway facilities were evaluated in order to create a complete regional bikeway network.

Summary of Input Received Through Community Surveys

In June 2008, the FRCOG completed a survey of all the municipalities in Franklin County for two purposes: 1) to gain a better understanding of bicycling needs throughout the county, and 2) to learn if any of the towns have completed any bicycle facility planning or relevant improvements that should be incorporated into the Bikeway Plan Update. The survey was conducted as a telephone interview with the appropriate town representative, generally either the town administrator or Selectboard member. Twenty-two of the twenty-six towns in the county responded to the survey.

At the time of the survey, none of the towns had taken any official action, independent from the FRCOG regarding implementation of bicycling facilities or had any proposals in town meeting or committees related to bikeways. Despite this lack of formal action, almost all of the town representatives expressed great enthusiasm for bicycling and were interested in participating in the *Franklin County Bikeway Plan Update*.

The rise in gasoline prices was often cited as a reason for the need for more attention being paid to the development of bikeway facilities within their communities. In addition, almost all of the towns described many of their residents as active bicyclists either for commuting or recreational

purposes. A number of towns also expressed that they often observed recreational bicyclists riding through their communities on the weekends during the warmer months further demonstrating that there is a great demand for bicycling in many parts of the county.

Several common themes emerged from the surveys. The most prevalent and strongly emphasized theme was a concern for safety. Town leaders were consistently concerned with their residents' and visitors' safety as they bicycle on the roads within their jurisdiction. Particularly, they were most concerned with the safety of inexperienced or novice bicyclists who may not have the skills or experience to navigate busy, narrow, winding roads.

When asked what type of bikeway facilities the towns would like to see be part of the Bikeway Plan Update, four primary goals materialized. They are listed below in the order of frequency mentioned:

- 1) Provide safe recreational routes for residents (from the novice to expert level).**
- 2) Provide safe routes for residents as an alternative to the automobile.**
 - a. To allow residents to connect to town centers, jobs, and commercial destinations (e.g. convenience stores, creameries) without having to drive.
 - b. Franklin County Bikeway Committee members who own bicycle shops also reported a sharp increase recently in the number of people interested in bicycling to work – mainly to destinations such as Greenfield, but as far away as Holyoke – due to rising gas prices.
- 3) Provide safe routes for the many expert bicyclists that “tour” through the region.**
 - a. Several towns viewed these bicyclists, who often come from out-of-state or the region, as potential economic tourism sources.
 - b. Anecdotal information seems to show that there are bicyclists from out-of-state that often park in Franklin County and cycle to Hampshire County or to Vermont/New Hampshire and vice versa. They are also many bicyclists that travel in long loops throughout the county.
- 4) Provide safe routes to school for children.**

These goals were also verified as important to residents during the Franklin County Bikeway Committee Meeting and the Public Meeting. As a result, these goals helped shape the identification process of new bikeway routes for this plan.

Previously Identified Potential Links to the Franklin County Bikeway

Deerfield Route (Route 5/10 Bypass)

The Deerfield Master Plan (April 2000) identified a specific route that would provide an alternative to bicycling on Route 5/10 in Deerfield. This potential route would provide a connection for bicyclists traveling south from Greenfield through Deerfield. The plan recommends the construction of an off-road bike path to the south of the Cheapside Bridge and

to the west of Route 5/10. The proposed route travels near the Deerfield River to Pine Hill Road (or Old Ferry Road which is an old 1732 county road), and would provide a connection for bicyclists into Historic Deerfield. There is currently a dirt road along a portion of this route that could serve as the bike trail. However, there are a number of potential obstacles to the implementation of this proposed bike path that require further investigation prior to determining whether this route is feasible. There are wetlands between Route 5/10 and Pine Hill Road that are a potential obstruction to the development of this bike path. In addition, this route travels over private property and it is not known whether a legal right-of-way or access to this route could be secured. A thorough study of the feasibility of this route should be completed to determine if an off-road bicycle path could be developed. This study could include the analysis of all options including a crossing of the Deerfield River to Greenfield. This option may be cost prohibitive and environmentally not feasible but is worth examining on a conceptual level.

Millers River Greenway (Orange and Athol)

The Towns of Orange and Athol have identified the development of a bikeway/greenway along the Millers River as a priority, and have taken the initial steps towards completing a design. In 2000, a preliminary feasibility study and route assessment was completed for a potential off-road bicycle facility. Initially, the proposed project was to create a greenway along the Millers River connecting Orange and Athol. However, after an assessment of the right-of-way and environmental impacts, this concept was determined to be infeasible and the idea of an on-road bicycle facility was established. Another feasibility study was then prepared. That report included descriptions of the existing conditions and traffic volumes on the roads that were being considered as a part of the bicycle route, the potential bicycle route alternatives for the proposed on-road bicycle facility connecting Orange and Athol, an analysis of the alternatives, and a recommended route.

During 2004 and 2005, the FRCOG worked with the Montachusett Regional Planning Commission (MRPC), the Town of Athol, and the Town of Orange to complete additional conceptual design work for the Millers River Greenway in the two towns. Further analysis of the on-road route that had been recommended as a result of the feasibility study was completed. A revised route was developed which included much of the on-road route identified in the 2000 study, but also incorporates an off-road bicycle path section in Athol.

The proposed route is approximately 6 miles long, beginning at the Orange Riverfront Park located on the south side of the Millers River in downtown Orange. The route continues east on East River Street to its intersection with Daniel Shays Highway (Route 202). The route then turns north and follows Daniel Shays Highway to an abandoned road that is located just south of the intersection of Daniel Shays Highway and Route 2A. The proposed route travels along this abandoned road (Procter Avenue), across 3 privately owned parcels and then through land that is publicly owned. The route reconnects with residential neighborhood streets (Jones Street, South Street and onto Canal Street) and then terminates in Athol at the Millers River Environmental Park, which opened in the summer of 2006. At this time the design of the Millers River

Greenway is conceptual, although it appears to be feasible. Further conceptual design work is needed in order to determine the most appropriate and feasible solutions to some existing design issues. While much of the off-road section of the route travels over land that is publicly owned, the proposed route does cross three privately owned parcels. There is also a location along the off road section of the route that a crossing of the Millers River is needed.

At this time, funding is needed for the design/engineering of the path. Once the design is completed, it is anticipated that state/federal funds would be sought for construction.

Erving Bicycle and Pedestrian Connections

During the development of the Erving Master Plan (2002) and also the public participation process for the Route 2 Safety Improvement Project, the lack of alternatives that accommodate walking and bicycling on Route 2 in Erving was noted as a community concern. It was recognized that Route 2 is not ideal for bicyclists and pedestrians because it has a narrow and winding layout, and lacks sidewalks and roadway shoulders in many locations.

As part of the Fiscal Year 2002 3C Transportation Grant Unified Planning Work Program, the FRCOG assessed potential bicycle and pedestrian links in and around Erving. Possible bicycle and/or pedestrian connections, other than the use of Route 2, to link Erving Center to the villages of Farley and Erving side were explored. The high traffic volume on Route 2, which is both a National Highway System road and Erving's Main Street, makes it difficult and dangerous for individuals to access Erving Center by bicycle or on foot from one of the adjacent residential neighborhoods or from other villages within the town of Erving. Several possible alternatives were identified and a preliminary assessment of these options was completed. This work included the assessment of several potential connections in and around Erving Center.

In Erving all possible off road connections in the vicinity of Erving Center were examined in the field and also on Town Assessor's maps. The steep slopes to the North of Route 2 in Erving center poses the most dramatic physical obstacle to developing an off road path. There is limited opportunity to widen the sidewalk on the north side of Route 2 because the slope is extremely steep.

Consequently two possible routes were identified for connecting Erving Center and Farley. These two potential connections were also identified during the Erving Master Plan development process as feasible safe alternatives to walking and bicycling on Route 2 near Erving Center. As part of this task these two options were further examined to determine potential constraints.

Routes on and to the east of Mountain Road were explored. A potential connection from Gary Street was examined but none was found. A connection through the town owned cemetery located on Cemetery Road was found. There is an existing dirt trail through the easternmost end of the cemetery that connects to Flagg Hill Road. An examination of the ownership of this route showed that the cemetery is owned by the town of Erving and the path connecting to Flagg Hill Road is on property that is privately owned. The proposed route generally would travel along

one parcel. A survey would need to be completed to determine exactly where the property boundary is. This appeared to be the best option for making an off-road connection in Erving Center to the north of Route 2 given the steep slopes in this area.



Old Farley Road in Wendell

Another option that was identified as a potential off-road walking/bicycling route is an existing dirt road that is located to the south of the Millers River in Wendell referred to as Old Farley Road. The route is accessible from Arch Street off of Route 2 in Erving Center. Old Farley Road travels west along a dirt road that is located to the south of the Millers River in Wendell. Old Farley Road travels west for approximately 2 miles and connects to Posk Place in the Farley section of Wendell. Much of this route travels through land that is within the Wendell State Forest which is owned and managed by the DCR. It was thought that if a trail was developed on Old Farley Road that it would be worthwhile to consider the development of a soft surface trail instead of a paved surface due to the natural setting and proximity to the Millers River. In Farley the trail terminus at Posk Place is located near the Metacomet-Monadnock-Mattabesett (M-M-M) Trail hiking trail and also a popular fishing location.

The route could also continue west to Farley Road and Mormon Hollow Road which links to Wendell Road in Montague and connects to the Village of Millers Falls. There is also a possibility of this route linking to the east to Wendell Depot. These two extensions were not examined as part of the 2002 UPWP task but were noted as possible extensions during field work and mapping work. Further investigation of these extensions is needed to determine the feasibility.

Bicycle/Pedestrian Bridge on Greenfield Road

The shared roadway Connecticut River Route (formerly referred to as Phase V of the original Franklin County Bikeway Plan) is a spur that travels along the Connecticut River from Montague to Sunderland. This route uses Greenfield Road. The route currently uses a detour onto

Hatchery Road because of the absence of a bridge over the railroad tracks. The bridge was removed and never replaced. There are currently plans being designed as part of the Greenfield Road reconstruction project to construct a bicycle and pedestrian bridge over the railroad tracks where the vehicle bridge was previously located.

Identification of Areas of the Existing Bikeway in Need of Improvements

During the public participation process for the development of this *Franklin County Bikeway Plan Update*, the primary focus of the discussions was on new routes that would provide links throughout the county and to the neighboring regions. There was little discussion regarding the current Franklin County Bikeway. For the most part, the consensus of those participating in the discussions was that the existing bikeway network is not currently in need of improvements at this time. The few suggestions that were mentioned were:

- Installing bathroom facilities along various parts of the Bikeway.
- Installing more parking facilities along key points of the Bikeway.
- Increased maintenance of the routes during the winter such as plowing (this primarily applied to the shared roadway portions).

Elements considered while Evaluating Potential Bike Lanes and Shared Roadway Bike Routes

While evaluating potential routes for inclusion in the shared roadway bicycle network for this plan, the outside travel lane width, shoulder width, posted speed limit, traffic volumes, frequency of curb cuts, heavy truck volume, and pavement conditions were considered. By law almost all roads in the Commonwealth (see Appendix B which details Mass. General Laws Chapter 85), excluding interstate highways and most limited-access highways, are open to bicycling. However not all roads are appropriate for even the most experienced bicyclist. Bicyclists are also often in search of routes that have low traffic volumes and a shoulder that has smooth pavement and is generally kept clear of debris. The routes were evaluated based on the following criteria.

- The **quality of the pavement surface** was evaluated. The quality of the roadway surface is directly related to the safety and comfort of bicyclists.
- **Intersections with roadways** are important considerations in bikeway facility design. It is best if intersections are chosen that are bicycle friendly. Bicycle friendly intersections are those which are generally safe for bicyclist with such features as good sight distance, perpendicular approaches, etc. Or in the situation that there are intersections along otherwise preferable routes that are not bicycle friendly that measures be taken to improve the interface between the bike routes and the intersections' streets.

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- **Drainage grates** can pose a serious danger to bicyclists. They can trap the front wheel of a bicycle, and cause loss of control which can result in serious injury to the bicyclist and/or damage to the bicycle. As improvements are completed along roadways that are designated as a part of the bikeway network, hazardous drainage grates can be corrected to improve safety. All grates and utility covers should be located out of the bicyclists' path. After a roadway is resurfaced, grates and utility covers should be installed to be flush with the travel surface. Also, parallel bar drainage grates should be replaced with bicycle-safe grates.
 - **Railroad crossings** can also pose a serious danger to bicyclists. They can trap the front wheel of a bicycle, cause loss of control, and result in serious injury to the bicyclist and/or damage to the bicycle. Railroad-highway grade crossings should be designed to be at a right angle to the rails in order to eliminate the potential for a bicyclist's front wheel getting trapped in the flange-way. Also, the outside lane can be widened to allow bicyclists adequate room to cross the tracks at a right angle if the crossing angle is less than approximately 45 degrees. Another solution is to design the roadway approach to be the same elevation as the rails. Warning signs and pavement markers that are completed in accordance with MUTCD should be installed. In some instances consideration may be given to remove rail crossings that are no longer in use.

Popular Bicycle Corridors within the Region

Besides the formally established Franklin County Bikeway routes, there are other networks within the county that are already considered bicycling corridors by many. The majority of these corridors are used as "touring" routes on the weekends by moderate to expert recreational bicyclists. The following section describes corridors that are recognized as already popular bicycling routes, but are not currently part of the existing Franklin County Bikeway Network. Generally, these popular routes were identified through the public participation process or the observation of cyclists regularly using these routes. Some of the routes serve as "connector" routes that link major regional destinations, such as downtown Greenfield. Other routes provide good connections to neighboring regions, such as Hampshire County or Vermont.

It is important to recognize that the routes vary in the level of difficulty and suitability for bicyclists. Some of these routes are more difficult and better suited for the advanced bicyclists who has a strong knowledge of the rules of the road; the skills to navigate steep hills and narrow winding roads; and who is generally comfortable riding under varying conditions. The route descriptions are intended to provide an idea of the nature and characteristics of the individual routes. Further, the routes have been classified based on the general conditions of the route and the experience level of the rider for which the particular route is best suited. Please note that due to the wide range of experience among bicyclists, these classifications are subjective and are intended only to provide a relative level of difficulty for each route. Therefore, it is advised that

before using a route, bicyclists should survey it first in a motor vehicle to ensure that the route is appropriate for their level of experience.

The Franklin Regional Council of Governments, the cities and towns over whose roads you will travel, and the agencies and groups listed in this *Plan Update* are not responsible for your personal safety and in no manner certify the safety of these routes for use by bicyclists. These roads are suggested only as more suitable than others for bicycle travel. All users assume full responsibility for their own safety.



Bicycling on a Shared Roadway Route

The following are the general classifications that were used for rating the routes in terms of the experience level.

Novice – Novice routes are intended for bicyclists that are beginners or casual riders. These routes are usually fairly flat with three to five foot shoulders on the roadway or on roadways with smaller shoulders but slow motor vehicle traffic. They also include off-road bike paths.

Intermediate – Intermediate routes are meant for bicyclists that are knowledgeable in the rules of the road and are capable of handling moderately hilly terrain. These routes often have shoulders on the roadway, typically ranging between three to five feet. These routes can also have hills, but they are usually not too steep, or if there are steep grades, the inclines are for relatively short distances. The roadways also usually have decent sightlines for motorists to see oncoming bicyclists.

Advanced – Advanced routes are meant for bicyclists with advanced technical skills. These routes may have little to no shoulders and may have short sightlines for motor vehicle drivers. These routes may also have long, steep climbs that are physically challenging.

West Franklin County Routes

- ***Buckland/Ashfield Loop*** (24.7 miles). This loop travels through the western Franklin County towns of Buckland, Shelburne, Conway, and Ashfield. It begins in Shelburne Falls on North Street and continues on that road as it turns into Ashfield Road/Route 112 and heads south towards Ashfield. Turning left onto Buckland Road, from Route 112, and brings bicyclists onto Route 116 traveling east towards Conway. In the Conway town center, bicyclists then turn left onto Shelburne Falls Road in order to loop northwest back to Shelburne Falls, where the roads turns into South Conway Road/Summer Street/Conway Road/North Street. **INTERMEDIATE**



Route 112 in Buckland

- ***Western Franklin County Loop*** (30.65 miles). This route brings bicyclists through the hills of western Franklin County. It begins in Ashfield on Route 112 and heads north. The route turns left onto Upper Street in Buckland and brings bicyclists onto Charlemont Road/South River Road, which follows the Deerfield River in Charlemont. A small portion of this road has rough pavement with large potholes. This road eventually turns into Route 8A in Charlemont, which bicyclists can ride south into Plainfield, where they can turn left onto Route 116/West Main Street and head east back to Ashfield. Route 116 will reconnect with Route 112. Bicyclists then turn left (north) on Route 112 and arrive back at the beginning of the loop. Note: this loop is very hilly and is strenuous. In addition, Route 8A does not have shoulders along the roadway for most of its length. **ADVANCED**



Route 112 in Ashfield

- ***West County - Greenfield Connector*** (10.2 miles). This route allows bicyclists to travel between the west county area and downtown Greenfield without having to ride on Route 2, which can be a more heavily traveled and difficult route. The route begins in Conway Town Center on Shelburne Falls Road. By traveling north on Shelburne Falls Road, bicyclists can access Bardswell Ferry Road, which forks to the right off of Shelburne Falls Road. Bicyclists then travel northeast on Bardswell Ferry Road over the Deerfield River to Shelburne. Turn right onto Taylor Road. Taylor Road connects to South Shelburne Road, which by turning right onto it, brings bicyclists almost to downtown Greenfield at the Route 2/Route 2A Rotary. At the end of South Shelburne Road, bicyclists should turn right onto Munson Road, followed by a quick left onto Fairview Street, which will allow bicyclists to ride under Interstate 91. From Fairview Street, bicyclists should follow it to its end, and by turning right onto Newton Street, will be able to access Route 2. Note: there are some steep, but short hills involved in this route.
INTERMEDIATE

- ***Shelburne-Vermont Connector*** (11.3 miles). This route connects western Franklin County to bike routes in Vermont using Route 112 beginning in the Town of Shelburne and continuing through the Town of Colrain to the Vermont border. ADVANCED
- ***Ashfield-Williamsburg Connector*** (9.5 miles). This route connects from Ashfield and the Western Franklin County Loop to Williamsburg in Hampshire County. This route travels on Williamsburg Road to Ashfield Road in Williamsburg. This road has a narrow shoulder and is winding but is a low volume road with 840 vehicles a day. It is popular bicycling connection and provides a link to Route 9 in Hampshire County and the greater Northampton area. A bicycle path project in the Leeds area of Northampton is currently under construction which will link directly to the Northampton Bike Path via Look Park.

This bike route on Williamsburg Road will bring bicyclists to the center of Williamsburg which within five miles of the terminus of the bike path that is currently under construction. INTERMEDIATE

Central Franklin County Routes

- ***River Road Loop*** (18.7 miles). This loop begins at the Canalside Trail Bike Path parking area at the East Deerfield Railroad Yard in Deerfield where the southern terminus of the Canalside Trail Bike Path is located. The loop exits the parking area right onto McClelland Farm Road. At the intersection of McClelland Farm Road and River Road turn left onto River Road (south). Continue on River Road to the intersection of Route 116 to the immediate west of the Deerfield Sunderland Bridge. At this point the River Road Loop would take the bicyclist left across the Connecticut River on Route 116, and then returns northward on the Franklin County Bikeway's "Connecticut River Route" (Route 47/Meadow Road/Greenfield Road Extension). The other option at the intersection of Route 116 is to proceed south on River Road across Route 116 into Whately (see next route "River Road Connection into Hampshire County"). INTERMEDIATE
- ***River Road Connection into Hampshire County*** (15 miles). This route travels from the southern terminus of the Canalside Trail Bike Path on the Deerfield section of the River Road Route (as described in the "River Road Loop"). At the intersection of River Road and Route 116 turn right and then immediately left to continue south on River Road into Whately and Hatfield (in Hampshire County). This route provides a link to Hampshire County and Northampton (a regional destination). INTERMEDIATE



River Road in Whately

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- ***Deerfield Upper Road- Deerfield Lower Road Loop*** (12.8 miles). This route loops through Deerfield beginning with parking in Historic Deerfield and following Mill Village Road south to Stillwater Road, which will connect to Deerfield Upper Road. From there, a bicyclist can take the route north to Wisdom Way in Greenfield to connect to Deerfield Lower Road, completing the loop back to Deerfield Upper Road to head back to Historic Deerfield. INTERMEDIATE
 - ***Greenfield Leyden-Plain Road Loop*** (7.16 miles). This loop is used by the Greenfield Lightlife Triathlon every year for the bicycling portion of the event. It begins on the Franklin County Bikeway's "Greenfield-Montague Loop" at the parking lot of the Greenfield Swimming Pool, which is located at the Nash's Mill Road terminus of the Riverside Greenway Bike Path. From there, the loop travels west on Nashs Mill Road to connect to Colrain Road for a short distance before it intersects with Plain Road. Traveling north on Plain Road/Green River Road takes the bicyclist to Eunice Williams Drive, which includes a covered bridge over the Green River. From there, the route travels on Leyden Road south to Nashs Mill Road. Note: Leyden Road high traffic volumes and narrow shoulders and therefore caution should be used on this route. INTERMEDIATE
 - ***Whately-Conway Loop*** (17.2 miles). This route loops through the southeastern portion of Conway into Whately. This loop could be a route by itself or become a portion of a longer route – particularly the Deerfield Upper Road-Deerfield Lower Road Loop mentioned above. The route begins at the intersection of Stillwater Road and Conway Road (Route 116) and then travels west on Route 116 to Whately Road, where bicyclists can travel south. Whately Road will turn into Conway Road in Whately. Continue traveling south and bear right onto Webber Road to connect to Haydenville Road to travel east. On Webber Road, bear left at the fork for Laurel Mountain Road. Shortly following this fork turn left onto Haydenville Road. From Haydenville Road turn left onto Chestnut Road/ North Street/South Mill River Road and loop back to Route 116.

This route also provides an alternative for bicyclists to continue traveling south on Haydenville Road to Mountain Street in Williamsburg and onto North Farms Road in Northampton. This route connects directly to the Northampton Bike Path in Florence. Once on the Northampton Bike Path, it is possible to connect to various off-road (bike path) facilities including the Norwottuck Rail Trail (via downtown Northampton), the Manhan Rail Trail in Easthampton and the extension of the Northampton Bike Path that travels to the Leeds area of Northampton. This route provides a direct connection to Hampshire County and the Pioneer Valley bicycling routes via Northampton. Note: Haydenville Road has high traffic volumes and no clear shoulder markings, and therefore caution should be used on this road. INTERMEDIATE

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- ***Deerfield Route*** (8 miles). This proposed route provides a safer alternative to traveling on Route 5/10 for bicyclists traveling south from Greenfield through Deerfield; however, it is conceptual at this point. The proposed route was recommended in the April 2000 Deerfield Master Plan. It suggests the construction of an off-road bike path to the west of Route 5/10 south of the Cheapside Bridge (over the Deerfield River in Greenfield and Deerfield). The proposed conceptual route would travel near the Deerfield River to Pogues Hill Road, which would then lead bicyclists into Historic Deerfield. There is currently a dirt road along a portion of this route that could possibly serve as the bike trail. However, there are a number of potential obstacles to the implementation of this proposed bike path that need further investigation prior to determining whether this route is feasible. There is the presence of wetlands between Route 5/10 and Pine Hill Road. In addition, this route crosses private property, and the possibility of securing legal access to this route has not been explored. From Historic Deerfield, bicyclists can continue south along Mill Village Road, crossing Route 5/10 to Sugarloaf Street. The crossing of Route 5/10 can be dangerous during high traffic times and, as a result, a pedestrian-activated traffic signal may be necessary. NOVICE

East Franklin County Routes

- ***Shutesbury Loop*** (20.89 miles). This loop travels through Shutesbury from the existing Leverett-Amherst Route of the Franklin County Bikeway. It heads east on Shutesbury Road/Leverett Road to the intersection with Wendell Road. There the loop travels north to Lake Wyola via Locks Pond Road and then heads west on Lakeview Road/North Leverett Road, where it connects back with the existing bikeway on Montague Road. Note: Shutesbury/Leverett Road has high amounts of traffic and little to no shoulders – caution should be exercised on this route. INTERMEDIATE
- ***Franklin County to Vermont Loop*** (18.23 miles). This loop begins on the Franklin County Bikeway's Greenfield-Montague Route at the intersection of West Gill Road and Hoeshop Road in Gill. From there, a bicyclist can travel north on Turners Falls Road to Purple Meadow Road (via west on Northfield Road) to Huckle Hill Road in Bernardston. This road then travels into Vermont to loop back south on Pond Road/Scott Road/West Road to Mount Hermon Station Road, which leads back to Turners Falls Road. Note: this loop is strenuous due to the very hilly terrain. ADVANCED
- ***Orange-Greenfield Route*** (24.8 miles). This route connects the Town of Orange to Greenfield as part of a general route corridor that was identified in the Massachusetts Bike Transportation Plan (2007). The Massachusetts Bike Plan identified a series of route networks statewide. The connection from Worcester to Greenfield was identified as a secondary route. A modification to the route proposed in the Bicycle Plan for the section of the secondary route between Orange and Greenfield is proposed and described as follows. It begins in the town center of Orange at the intersection of Route 122 and West River Street. The route proceeds west on West River Street to Holtshire Road and

onto West Orange Road. This leads bicyclists to Wendell Depot Road where they can travel southwest to the Wendell town center. From there, the route heads northwest on Montague Road/Wendell Road/South Prospect Road until it enters the Village of Millers Falls. From Millers Falls, bicyclists travel on Millers Falls Road, which is part of the existing Franklin County Bikeway to Turners Falls, where bicyclists can use the Canalside Trail Bike Path to East Deerfield and onto McClelland Farm Road and River Road. River Road travels to Route 5/10. Bicyclists travel North on Route 5/10 to enter Greenfield over the Route 5/10 Cheapside Bridge. INTERMEDIATE-ADVANCED.

- ***Wendell-Erving Route*** (6 miles). This route was proposed in the Town of Erving's Master Plan (June 2002) as a possible alternative route for bicyclists to travel from Erving Center to Farley without using Route 2. This route would utilize a gravel roadway that travels to the south of Route 2 in Wendell from Erving Center (Arch Street) to Farley (Posk Place). A majority of this dirt road travels through the Wendell State Forest which is owned by the DCR. A preliminary investigation of the feasibility of the development of this trail as a bicycle and pedestrian route identified five or six private properties that the trail may potentially cross. Further research and planning is needed to determine the exact location and clarify any potential right of way or access issues. There is also a possibility of the route continuing to the east to Wendell Depot and to the west to Farley Road, Mormon Hollow Road, Wendell Road and to South Prospect Street which connects into the Village of Millers Falls although these alternatives have not been examined. NOVICE-INTERMEDIATE
- ***Northeastern Franklin County Route*** (15 miles). This route takes bicyclists on a course beginning in downtown Orange and ending in downtown Northfield. From downtown Orange, bicyclists can take Route 2A west to Route 78/Warwick Road and head north. From Warwick Road/Orange Road, take a left onto Northfield Road along the Mount Grace State Forest into downtown Northfield ending at Main Street, which is currently part of the existing Franklin County Bikeway. Note: this route is hilly and follows windy roads with little to no shoulder. This route is recommended for experienced bicyclists only. If bicyclists wish to continue from downtown Northfield, they have two options. They can go north into New Hampshire or they can continue along the existing Franklin County Bikeway. To connect to the New Hampshire Rail Trails (Ashuelot and Fort Hill Rail Trails) see the next proposed route. ADVANCED
- ***New Hampshire Connector*** (3.9 miles). This route connects to the existing Ashuelot and Fort Hill Rail Trails in New Hampshire. These rail trails are currently not paved, but instead have sandy/cinder surfaces. To reach the trail heads from Northfield, travel north on Main Street and then bear left on Route 63. There is an unfinished trail head parking lot on Route 63 on the left after passing Barber Road and descending through a

switchback. Note: this route has long, steep climbs with no shoulders at times. This route should only be ridden by advanced, experienced bicyclists. **ADVANCED**

- **Millers River Greenway (Orange-Athol)** (5 miles). This route begins at the Orange Riverfront Park located on the south side of the Millers River in downtown Orange. The route continues east on East River Street to its intersection with Daniel Shays Highway (Route 202). The route then turns north and follows Daniel Shays Highway to an abandoned road that is located just south of the intersection of Daniel Shays Highway and Route 2A. The proposed route travels along this abandoned road (Procter Avenue), across 3 privately owned parcels and then through land that is publicly owned. The route reconnects with residential neighborhood streets (Jones Street, South Street and onto Canal Street) and terminates in Athol at the Millers River Environmental Park. This route is in the early planning stages at this time. The route is not complete as a crossing of the Millers River is needed along the off-road section of the proposed route.
NOVICE-INTERMEDIATE

Connections to Community Focal Points

One of the recurrent themes during the interviews with the towns regarding biking in Franklin County was the desire to be able to use bicycles as an alternative to the car in order to travel to certain key locations within the county. These community focal points were both civic and commercial in nature. Residents want to be able to bike to their local convenience store and nearby creameries, as well as the library and school. A number of the proposed routes in the previous section achieve this goal of connecting community focal points. The **Western County Greenfield Connector** links the western portion of Franklin County to the commercial and community center of Greenfield. The **Deerfield Route** connects Greenfield with both Historic Deerfield and Deerfield Center. The **Wendell-Erving Route** connects the town/village centers of Erving Center, Farley and Wendell together while also bypassing the potentially dangerous Route 2. The **Athol-Orange Greenway** connects the town centers of Athol and Orange.

Connections within the Region

Input received during both the interviews and the public meetings illustrated that residents are also very interested in establishing bikeway routes that connect the various areas of Franklin County. The initial Franklin County Bikeway Network is located within the central portion of the county, leaving the western and eastern sections without any bicycle routes or facilities. Although it was difficult due to the steep grades that exist beyond the central area, this plan proposes routes that are intended to establish region-wide connections. One such route is the **Buckland/Ashfield Loop**, which connects four of the western county towns of Buckland, Ashfield, Conway and Shelburne. Another connecting route is the **Western County Greenfield Connector** linking the western half of the county to Greenfield. The **Whately-Conway Loop**

connects the south-central towns of Whately, Conway, and Deerfield, which in the current Franklin Bikeway Plan did not have any established linkages. The ***Greenfield-Orange Route*** connects the eastern half of the county to Greenfield. And finally, the ***Northeastern Franklin County Route*** connects several of the towns in the eastern portion of the county including Orange, Warwick, and Northfield and also allows access from the eastern area of the county to the already established portions of the Franklin County Bikeway in the north-central part of the county.

Connections to the Neighboring Regions

Not only were connections within the region found to be important to residents, but connections outside to neighboring regions including the surrounding counties and Vermont and New Hampshire were equally important. Several of the proposed routes accomplish this goal. The ***Shelburne-Vermont Connector*** links western Franklin County to Vermont via Route 112. The ***Whately-Conway Loop*** connects Hampshire County through the Town of Whately on Haydenville Road. The ***Ashfield-Williamsburg Connector*** also connects Franklin and Hampshire Counties. The ***Franklin County to Vermont Loop*** connects eastern/central Franklin County with Vermont through the Town of Northfield. New Hampshire can be accessed through the ***Northeastern Franklin County Route*** on the ***New Hampshire Connector***. Finally, the ***Athol-Orange Greenway*** connects Franklin County with neighboring Worcester County.

Safety Issues/Considerations

Safety is a priority as expansions to the Franklin County Bikeway are identified. Feasible shared use paths have been identified as the preferred facility in order to separate motor vehicles from bicycle traffic. In addition, in places where there are local roads that are unsuitable for bicycle travel, a safer alternative route using nearby local roads and/or bike paths was chosen. Every effort was made to retain a direct route without compromising safety.

This update to the Franklin County Bikeway Plan also took into consideration the different, and sometimes conflicting, needs of a wide range of users – from the novice recreational riders to the expert riders. The bikeway network has portions of it that are considered safe for all of these users. However, there are some routes– especially portions of the shared roadway sections – that should only be considered safe for the more advanced expert riders. To better ensure safety, these sections should not be ridden by inexperienced bicyclists.

In addition to providing safe bicycling facilities, it is important to educate users about personal safety and the “rules of the road.” Along these lines, the FRCOG has included bicycle safety instructions and information that encourage safe bicycling practices whenever possible. In recent years a number of promotional and information tools have been developed and bicycle safety information has been incorporated whenever possible and effective. The FRCOG worked in conjunction with the Pioneer Valley Regional Planning Commission and MassHighway to

produce a bicycle promotional media campaign. As part of this project a 30 minute video was developed which highlights the lives of several Hampshire, Hamden and Franklin County residents who bicycle for transportation. Bicycle safety information and instructions were included as part of this video. A website was also developed which contains information on bicycling in the region, and safety information was included on this website which can be viewed at www.enjoytheridebybike.com. The website provides information regarding safety rules, the benefits of bicycling, and the basic rules of the road. Information on safe bicycling was also included in the Franklin County Bikeway Map for the central region of Franklin County.

Recommendations/Action Plan

This Franklin County Bikeway Plan update is intended to build on the work that has been completed to date in Franklin County to identify and develop bicycle facilities. This plan also expands the work previously completed to promote bicycling as a viable transportation alternative. The following recommendations are the result of the work that was completed during this planning process with the input of the public and the knowledge from previously completed related work. As previously stated the purpose of this document is to *update the 1993 Franklin County Bikeway Plan, to expand the geographic range beyond the central area of Franklin County, and to diversify the original objectives to include recreation, tourism and quality of life related bicycling issues*. These recommendations are intended to provide direction for future bicycle facility planning as well as work that will create an atmosphere that is encouraging and supportive of this alternative transportation method.

- Establish bikeway routes connecting the existing Franklin County Bikeway in the central part of the region with the outlying areas.
 - Further explore the feasibility of the proposed **Deerfield Route** including but not limited to the determination of the potential for gaining a legal right of access, investigate the extent of the wetlands that exist along this proposed route and determine other environmental issues related to the development of this bike route.
 - Further explore the feasibility of the proposed **Wendell-Erving Route** including but not limited to determining the potential for gaining a legal right of access, determine any environmental issues related to the development of this bike route, investigate the possibility of working with the Department of Conservation and Recreation to develop this trail, and investigate the feasibility of developing it as a soft surface trail.
 - Identify possible funding sources for the implementation of proposed connecting routes.

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- Coordinate with MassHighway as road resurfacing projects are being planned and designed so that roads that are part of the bikeway can be improved to better accommodate bicycles if feasible and in keeping with the rural nature of the region.
 - Identify and construct bikeway routes (on-road and off-road) connecting major employment centers with residential areas.
 - Develop bikeway routes connecting with public transit and/or park and ride lots.
 - When the Franklin County Transit Center is constructed, a route should be established connecting this site to the Franklin County Bikeway.
 - As Park and Ride facilities are established within the county, ensure that bike routes are created to link to these sites.
 - Identify and implement measures that will improve safety for bicyclists in the region.
 - Create educational materials such as brochures, videos, public service announcements (PSA) that educate both bicyclists and motor vehicle drivers of safety issues and safe bicycling practices.
 - Encourage local organizations to hold Bike Safety Days to raise awareness of bicycle safety issues.
 - Develop an information packet for organizations interested in hosting a Bike Safety Day for their community.
 - Establish bikeway routes (preferably off-road) connecting schools with residential areas as a means of creating safe travel routes to school.
 - Explore opportunities to establish off-road bicycle routes around schools by creating maps which identify publicly owned properties that may provide an opportunity to establish connections to residential neighborhoods.
 - Explore opportunities for schools in Franklin County to take part in the Massachusetts Safe Routes to School Program.
 - Establish bikeway routes connecting Franklin County with neighboring counties and states.
 - Create an inter-jurisdictional Regional Bikeway Committee with membership that includes representatives from all neighboring counties and Vermont and New Hampshire. The mission of this inter-jurisdictional committee would be to coordinate bikeway planning and ensure that connecting routes are established.

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- Provide information and resources to encourage tourism opportunities related to bicycling throughout the county.
 - Create promotional materials for the Visitors Centers, Chambers of Commerce, and the Massachusetts Office of Travel and Tourism (MOTT) to use in their promotional campaigns.
 - Encourage the Visitors Centers, Chambers of Commerce, and the Massachusetts Office of Travel and Tourism (MOTT) organizations to include information on bicycling in Franklin County in their tourism materials.
 - Create advertisements to be used in bicycling magazines and websites promoting bicycling in Franklin County.
 - Increase the number of trips made by bicycle for transportation and recreational purposes.
 - Outline preliminary strategies that would promote these tourism opportunities with bike groups around the region and the country.
 - Outline promotional bicycling strategies for commuters and recreational riders.

Potential Funding Sources for Bicycle Improvement Projects

Transportation Improvement Program (TIP) Regional Transportation Funding

The Transportation Improvement Program (TIP) is a prioritized, multi-year program for the implementation of transportation improvement projects in a specific region using federal funds. The TIP is an expression of intent to implement the listed projects. A final commitment of funds for each of the projects has not been issued. Projects on the TIP are solicited from Franklin County municipal officials, MassHighway Districts 1 and 2, the Capital Expenditures and Programming Office (CEPO), the Franklin Regional transit Authority, the FRCOG and the Franklin County Transportation Planning Organization (TPO) members. Bicycle related infrastructure improvement projects are eligible to receive funding through the TIP process; however, annual funding to the region is limited and must compete against other transportation related infrastructure improvement projects.

Massachusetts Transportation Enhancement Program

The Transportation Enhancement Program (TE) provides opportunities to preserve, restore, and enhance components of the surface transportation system. Its purpose is to provide added features to standard transportation facilities and programs. Eligible projects include development of bicycle and pedestrian facilities, educational programs, landscaping, acquisition of scenic easements, historic preservation, restoration of buildings and structures, removal of outdoor advertising, archaeological research, environmental mitigation of storm water pollution, and establishment of transportation museums.

Safe Routes to School Program

The Safe Routes to School Program (SRTS) was created as part of the SAFETEA-LU Federal transportation legislation. The goals of the program are to: (a) enable and encourage elementary and middle school children, including those with disabilities, to walk and bicycle to school; (b) make walking and bicycling to school safe and more appealing; (c) facilitate the planning, development and implementation of projects that will improve safety; and (d) reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

The program aims to reduce congestion, air pollution, and traffic congestion near participating schools, while increasing the health, safety, and physical activity of elementary and middle school students. The programs include: Establishing healthy lifetime habits for students; increasing children's independence; helping students arrive at school ready to learn; and teaching safe pedestrian, bicyclist, and driver skills.

Schools that enroll in SRTS are provided with resources and outreach support services that are aimed at increasing walking and bicycling to and from school. Participating schools receive free

promotional materials to implement SRTS, plus no-cost educational materials targeted to students, parents, and community leaders. Training prepares school stakeholders to identify school access challenges and design solutions. After a year of enrollment and activity in the program, the school can request technical assistance to improve the walking and bicycling environment around the school. This component of the program involves the completion of an evaluation and potentially assistance with engineering and constructing improvements to the pedestrian and bicycle infrastructure around the school. The program offers schools technical assistance designing, implementing, marketing, and evaluating initiatives tailored to each school's needs and priorities. School partners qualify for infrastructure improvements to enhance safety along school routes. In Massachusetts, the program is coordinated through MassRIDES.

Community Level Initiatives to Encourage Bicycle Friendly Communities

Bicycle friendly design can also encourage bicycling with a community. On the local level standards and guidelines may be incorporated into a community's zoning regulations in order to ensure that future development is completed in a manner which is bicycle friendly. Considerations of site design/layout, building design, lighting, sidewalks and bicycle amenities can serve to create new development patterns that encourage bicycling.

Conclusion

Franklin County is a great place to bicycle – whether it is for transportation, recreation, or physical fitness. The rural nature of the county means that many of the roads are relatively lightly traveled by motorized vehicles. It also means that there are beautiful views and vistas that can be enjoyed while bicycling to work, to a town center, or for recreation.

The foremost goal of this *Franklin County Bikeway Plan Update* is to reinforce through practice that bicycling is a viable transportation alternative. To help achieve this goal, the bikeway network was expanded to connect to additional areas of the county and neighboring regions. Connections were also made to important destinations, such as town centers, to foster residents' ability to use their bicycles for commuting and to complete errands. In addition, new bikeway routes were proposed that allow residents to bicycle throughout the county for the purposes of recreation and physical fitness. The picturesque routes that are recommended will also help promote bicycle tourism in the county. This updated Bikeway Plan provides a comprehensive look at bicycling in Franklin County by incorporating the transportation, recreation, and tourism aspects of cycling in order to promote a more sustainable "green" transportation system.

Appendix A

Definitions

This document refers to a number of specific types of bikeway and bikeway-related terms. To clarify, the following definitions are provided based on information provided in the American Association of State Highway and Transportation Officials (AASHTO).

AASHTO: The American Association of State Highway and Transportation Officials.

ADA: The Americans with Disabilities Act.

Bikeway: A generic term for any road, path, or way which is in some manner specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other modes of transportation.

Bike Path: A bikeway that is physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Bike paths may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Such facilities are also termed shared use paths.

Bike Lane: A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles.

Bike Route: A segment of a system of bikeways designated by a jurisdiction with appropriate directional and informational markers, with or without a specific bicycle route number.

FHWA: The Federal Highway Administration.

LOS: Level of Service.

MUTCD: Manual on Uniform Traffic Control Devices (MUTCD) published by FHWA providing guidance on how roadways should be signed.

Right-of-Way: A general term denoting the legal right of access to a particular piece of land, property, or interest therein, usually in a strip acquired for or devoted to transportation purposes. Right-of-Way is also abbreviated ROW.

Right of Way: The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian.

SAFETEA-LU: Is the most recent federal transportation legislation passed by Congress in 2005. The formal name of the bill is the “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).” It authorizes the maximum amount of funding to be used for federal surface transportation programs for highways, highway safety, and transit 2005 to 2009.

Shared Roadway: Any roadway upon which a bicycle lane is not designated and which may be legally used by bicycles regardless of whether such facility is specifically designated as a bikeway.

Appendix B

Massachusetts General Laws

CHAPTER 85. REGULATIONS AND BY-LAWS RELATIVE TO WAYS AND BRIDGES

Chapter 85: Section 11B. Bicycles; operation and equipment; regulations; federal product safety standards, effect; races; violations; penalties

Section 11B. Every person operating a bicycle upon a way, as defined in section one of chapter ninety, shall have the right to use all public ways in the commonwealth except limited access or express state highways where signs specifically prohibiting bicycles have been posted, and shall be subject to the traffic laws and regulations of the commonwealth and the special regulations contained in this section, except that: (1) the bicycle operator may keep to the right when passing a motor vehicle which is moving in the travel lane of the way, (2) the bicycle operator shall signal by either hand his intention to stop or turn, and (3) bicycles may be ridden on sidewalks outside business districts when necessary in the interest of safety, unless otherwise directed by local ordinance. A person operating a bicycle on the sidewalk shall yield the right of way to pedestrians and give an audible signal before overtaking and passing any pedestrian.

Operators of bicycles shall be subject to the following regulations:

(1) The operator shall ride single file on any way except when passing.

(2)(i) The operator shall ride only upon or astride a permanent and regular seat attached to the bicycle; a passenger shall ride only upon or astride a permanent and regular seat attached to the bicycle or to a trailer towed by the bicycle.

(ii) The operator shall not transport another person between the ages of one to four years, or weighing forty pounds or less, on a bicycle, except in a “baby seat”, so-called, attached to the bicycle, in which such other person shall be able to sit upright; provided, however, that such seat is equipped with a harness to hold such other person securely in the seat and that protection is provided against the feet or hands of such person hitting the spokes of the wheel of the bicycle; or upon or astride a seat of a tandem bicycle equipped so that the other person can comfortably reach the handlebars and pedals. The operator shall not transport any person under the age of one year on said bicycle.

(iii) Any person 16 years of age or younger operating a bicycle or being carried as a passenger on a bicycle on a public way, bicycle path or on any other public right-of-way shall wear a helmet. Said helmet shall fit the person’s head, shall be secured to the person’s head by straps while the bicycle is being operated, and shall meet the standards for helmets established by the American National Standards Institute (ANSI Z 90.4) or subsequent standards or the Snell Memorial Foundation’s nineteen hundred and eighty-four standard for use in bicycling or subsequent

standards. These requirements shall not apply to a passenger if the passenger is in an enclosed trailer or other device which adequately holds the passenger in place and protects the passenger's head from impact in an accident.

(iv) A violation of clause (ii) or (iii) shall not be used as evidence of contributory negligence in any civil action.

(3) The operator shall give an audible warning whenever necessary to insure safe operation of the bicycle; provided, however, the use of a siren or whistle is prohibited.

(4) The operator shall park his bicycle upon a way or a sidewalk in such a manner as not to obstruct vehicular or pedestrian traffic.

(5) The operator shall not permit the bicycle to be drawn by any other moving vehicle. The operator shall not tow any other vehicle or person, except that bicycle trailers properly attached to the bicycle which allow for firm control and braking may be used.

(6) The operator shall not carry any package, bundle or article except in or on a basket, rack, trailer or other device designed for such purposes. The operator shall keep at least one hand upon the handlebars at all times.

(7) Every bicycle operated upon a way shall be equipped with a braking system to enable the operator to bring the bicycle traveling at a speed of fifteen miles per hour to a smooth, safe stop within thirty feet on a dry, clean, hard, level surface.

(8) During the period from one-half hour after sunset to one-half hour before sunrise, the operator shall display to the front of his bicycle a lamp emitting a white light visible from a distance of at least five hundred feet, and to the rear of said bicycle either a lamp emitting a red light, or a red reflector visible for not less than six hundred feet when directly in front of lawful lower beams of headlamps on a motor vehicle. A generator powered lamp which emits light only when the bicycle is moving shall meet the requirements of this clause.

(9) During the period from one-half hour after sunset to one-half hour before sunrise, the operator shall display on each pedal of his bicycle a reflector, or around each of his ankles reflective material visible from the front and rear for a distance of six hundred feet, and reflectors or reflective material, either on said bicycle or on the person of the operator, visible on each side for a distance of six hundred feet, when directly in front of lawful lower beams of headlamps of a motor vehicle. This clause shall not prohibit a bicycle or its operator to be equipped with lights or reflectors in addition to those required by clauses (8) and (9).

(10) No bicycle shall be operated upon a way with handlebars so raised that the operator's hands are above his shoulders while gripping them. Any alteration to extend the fork of a bicycle from the original design and construction of the bicycle manufacturer is prohibited.

(11) The operator of a bicycle shall report any accident involving either personal injury or property damage in excess of one hundred dollars, or both, to the police department in the city or town in which the accident occurred.

Any federal product safety standards relating to bicycles which are more stringent than the requirements of clauses (7) through (10), inclusive, shall supersede said requirements.

Competitive bicycle races may be held on public ways, provided that such races are sponsored by or in cooperation with recognized bicycle organizations and, provided further, that the sponsoring organization shall have obtained the approval of the appropriate police department or departments. Special regulations regarding the movement of bicycles during such races, or in training for races, including, but not limited to, permission to ride abreast, may be established by agreement between the police department and the sponsoring organization.

Violations of any provision of this section except violations of subclause (iii) of clause (2) shall be punished by a fine of not more than twenty dollars. The parent or guardian of any person under age eighteen shall not authorize or knowingly permit any such person to violate any of the provisions of this section. A bicycle operated by a person under the age of eighteen in violation of this section may be impounded by the police department, or in a town which has no police department, by the selectmen, for a period not to exceed fifteen days. A violation of any provision of this section by a minor under the age of eighteen shall not affect any civil right or liability nor shall such violation be considered a criminal offense.